

REMARKS

Upon entry of this amendment, claims 1-5, 7, 8 and 10-22 are all the claims pending in the application. Claims 6 and 9 are canceled by this amendment. Claims 13-22 are added as new claims. No new matter has been added.

Applicants enclose herewith a certified copy of the priority document (2000-28414) in accordance with 35 U.S.C. § 119(b). Accordingly, Applicants respectfully request that the Examiner acknowledge that the certified copy of the priority document has been received.

Applicants note that the claims have been amended for improved clarity and readability purposes. Such amendments do not narrow the scope of the claims and are not made in response to any prior art or other rejection.

I. Objection to the Specification

The Examiner has objected to the specification due to minor informalities. Applicants have amended the specification to address the Examiner's objections and to make various editorial amendments for grammatical and general readability purposes. No new matter has been added.

II. Claim Rejections under 35 U.S.C. § 112, second paragraph

Claims 6 and 9 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Applicants hereby cancel claims 6 and 9, thereby rendering this rejection moot.

III. Claim Rejections under 35 U.S.C. § 103(a)

Claims 1-12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Corrigan et al. (U.S. 6,522,977) in view of Alman (U.S. 4,479,718) and the admitted prior art (specification page 1, lines 9-25). Applicants respectfully traverse this rejection on the following basis.

Regarding claim 1, the Examiner recognizes that neither Corrigan nor Alman nor the admitted prior art teaches the specific combination of elements recited therein. Nonetheless, the

Examiner alleges that one of ordinary skill in the art would have been motivated to combine the teachings of Corrigan, Alman and the admitted prior art, and arrive at the claimed invention. Applicants respectfully disagree.

Claim 1 recites the features of a colorimeter and a micro-brilliance-feeling measuring device, wherein color data and micro-brilliance-feeling data are utilized to perform a color-matching calculation logic. Applicants respectfully submit that the combination of Corrigan, Alman, and the admitted prior art, fails to render obvious at least this feature of claim 1.

Corrigan discloses a method and apparatus for matching paint on a vehicle in which a plurality of remote terminals located at repair shops transmit color readings and associated vehicle identification information to a central computer (see col. 1, lines 60-64). In order to perform the color readings for the vehicles, Corrigan discloses the use of a paint scanning device in the form of a colorimeter (see col. 6, lines 47-49) or a spectrophotometer (see col. 5, lines 7-11) that is responsible for taking the color measurement of the vehicles.

Corrigan specifically sets forth at col. 6, lines 7-8, that the color “measurement can be made at a number of angles (i.e., 3-5 different angles).” In Corrigan, after the color measurement data is obtained by the paint scanner, the color measurement data and associated vehicle identification information are transmitted to a central computer where a paint matching process is performed (see col. 8, line 60 through col. 9, line 5).

In a similar manner, Alman discloses a method and apparatus for matching paint on a vehicle. Alman also discloses that colorimeters and spectrophotometers are typically used as the paint measuring devices (see col. 1, lines 20-26). For the color measurement of a metallic paint, Alman discloses that it is necessary to take measurements at more than one angle due to the orientation of the flakes in the metallic paint (see col. 1, lines 41-52). In particular, Alman teaches that for a metallic paint, the color measurement data must be acquired at a minimum of three different angles in order to achieve reliable results (see col. 1, lines 65-68 and col. 4, lines 12-29).

In Alman, the color measurement data is used to calculate the tristimulus values of X, Y, and Z (see col. 2, lines 47-54). The tristimulus values, in turn, can be used to calculate

perceptual color values describing lightness (L^*), redness/greenness (a^*), yellowness/blueness (b^*), saturation (C) or hue (H)(see col. 3, lines 10-13). As disclosed by Alman, the values of L^* , a^* , and b^* are the color values usually employed to characterize the color of a paint film (see col. 4, lines 48-49).

Accordingly, in Alman, standard color measuring tools (i.e., a colorimeter or a spectrophotometer) are utilized, but due to the metallic nature of the paint that Alman is concerned with, Alman teaches that measurements can no longer be taken at only a single angle, but instead, must be taken at a plurality of angles.

Based on the foregoing description of Corrigan and Alman, it is clear that each reference provides essentially the same elements for measuring the color of a painted surface. In Corrigan, a colorimeter or spectrophotometer (see col. 5, line 66 through col. 6, line 1) is used as a paint scanner, whereby measurements are made at 3-5 different angles in order to determine the color of the paint (see col. 6, line 24-28). Similarly, in Alman, a colorimeter or spectrophotometer is used a paint scanner, whereby measurement are taken at three or more angles in order to determine the color of the paint (see col. 1, lines 65-68 and col. 4, lines 12-29).

The Examiner's alleged motivation for combining Corrigan and Alman is that the colorimeter disclosed by Corrigan cannot process and capture the special characteristics of metallic paints. Thus, the Examiner takes the position that it would have been obvious to one of ordinary skill in the art to provide a color matching apparatus that utilizes both the color measuring device of Corrigan as well as the color measuring device of Alman. Applicants respectfully disagree.

As discussed above, Alman's solution to measuring metallic paint is to take measurements at a minimum of three angles utilizing a standard color measuring device. Corrigan, however, specifically discloses at col. 6, lines 24-29 that color measurements are taken at a number of angles, and in particular, three to five different angles. Thus, the multi-angle measurement in Corrigan is precisely the same approach that is disclosed by Alman.

Accordingly, Applicants respectfully submit that there would be no reason that one of ordinary skill in the art would be motivated to provide a color matching apparatus that utilized

the color measuring instruments of both Corrigan and Alman. Indeed, such redundancy would serve no apparent purpose and would result in a complex and expensive structure.

In addition, the Examiner recognizes that neither Corrigan nor Alman teaches the use of color characteristic data as recited in claim 1. In an attempt to cure this deficiency, the Examiner alleges that the K-values and S-values as disclosed in the admitted prior art correspond to the color characteristic data as claimed, and that it would have been obvious to utilize the K-values and S-values in the apparatus of Corrigan.

Applicant notes, however, that claim 1 does not merely recite the use of color characteristic data, but instead, recites that color characteristic data of full-color paints are entered into a computer. Applicants respectfully submit that the admitted prior art fails to teach or suggest such a feature. Applicants also respectfully submit that the admitted prior art fails to cure the deficiencies of Corrigan and Alman as discussed above.

Further, Applicants respectfully submit that the Examiner is mischaracterizing Alman by alleging that a standard color measuring device, such as a colorimeter or spectrophotometer, corresponds to the micro-brilliance-feeling measuring device as recited in claim 1. As disclosed by Alman, a standard color measuring device is utilized to derive X, Y and Z values at a number of different angles. Applicants submit, however, that the standard color measuring device and the X, Y and Z values, as disclosed by Alman, cannot be characterized as a micro-brilliance-feeling measuring device and micro-brilliance feeling data, respectively.

Based on the foregoing, Applicants respectfully submit that claim 1 is patentable over the cited prior art and respectfully request that the rejection be reconsidered and withdrawn. Claims 2, 3 and 10 depend from claim 1 and are therefore considered patentable at least by virtue of their dependency.

Claims 4 and 7 recite the features of a colorimeter and a micro-brilliance-feeling measuring device, wherein color data and micro-brilliance-feeling data are utilized to perform a particular color-matching calculation logic. For at least the same reasons as discussed above regarding claim 1, Applicants submit that claims 4 and 7 patentably distinguish over the cited

prior art. Accordingly, Applicants respectfully request that the rejection of claims 4 and 7 be reconsidered and withdrawn.

Claims 5 and 11 depend from claim 4, and claims 8 and 12 depend from claim 7. Accordingly, Applicants submit that these claims are patentable at least by virtue of their dependency.

IV. New Claims

Claims 13-22 are added as new claims. Claims 13-16 depend from claim 1, claims 17-19 depend from claim 4, and claims 20-22 depend from claim 7. Applicants submit that these claims are patentable based on the combination of features recited therein as well as by virtue of their dependency.

V. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,

Tohru HIRAYAMA et al.

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ACCOUNT NO. 23-0975

By: Kenneth W. Fields
Kenneth W. Fields
Registration No. 52,430
Attorney for Applicants

KWF/kes
Washington, D.C. 20006-1021
Telephone (202) 721-8200
Facsimile (202) 721-8250
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